TES PATENT AND TRADEMARK OFFICE

In re application

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Ahola, and Mats Carlquist

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June 23, 2005

For

CRYSTALLINE LIVER X RECEPTOR BETA PROTEIN

Examiner

Attorney Docket

102769-102

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, 19 AVG 2006

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Attorney for Applicants

INFORMATION DISCLOSURE LETTER

Mail Stop Amendment Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Sir:

The undersigned represents that the closest art of which he is presently aware has been cited herein and understands that this statement shall not be construed as a representation that no better art exists or that a thorough patentability search has been made.

The undersigned further represents that the filing of this Information Disclosure Statement shall not be construed to be an admission that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R.§ 1.56(b).

- 1. United States Patent Application Publication No. US 2004/0018560 A1 (BLEDSOE, RANDY K., ET AL.) 29 January 2004 (2004-01-29).
- 2. United States Patent No. 5,939,322 (RODAN, GIDEON A., ET AL.) 17 August 1999 (1999-08-17).
- 3. FÄRNEGÅRDH, MATHIAS, ET AL: The Three-dimensional Structure of the Liver X Receptor ß Reveals a Flexible Ligand-binding Pocket That Can Accommodate Fundamentally Different Ligands, THE JOURNAL OF BIOLOGICAL CHEMISTRY, Vol. 278, No. 40, Pages 38821-38828 (October 3, 2003).
- 4. WILLIAMS, SHAWN, ET AL: X-ray Crystal Structure of the Liver X Receptor ß Ligand Binding Domain, THE JOURNAL OF BIOLOGICAL CHEMISTRY, Vol. 278, No. 29, Pages 27138-27143 (July 18, 2003).
- 5. HOERER, STEFAN, ET AL.: Crystal Structure of the Human Liver X Receptor fs Ligand-binding Domain in Complex with a Synthetic Agonist, THE JOURNAL OF MOLECULAR BIOLOGY, Vol. 334, No. 3, Pages 853-861 (December 12, 2003).
- 6. CRONET, PHILIPPE, ET AL.: Structure of the PPARa and -y Ligand Binding domain in Complex with AZ 242; Ligand Selectivity and Agonist Activation in the PPAR Family, ELSEVIER SCIENCE LTD., Vol. 9, Pages 699-706 (August, 2001).
- 7. DATABASE UNIPROT (Online): Retrieved from EBI, Database accession no. P55055 Uniprot, XP002289057, 100% identity in 461aa overlap with SEQ ID NO 1 Abstract (October 1, 1996).
- 8. SHINAR, DORON M., ET AL.: NER, a new member of the gene family encoding the human steroid hormone nuclear receptor, ELSEVIER SCIENCE B.V., Vol. 147, Pages 273-276 (1994).
- 9. URBAN, FRANK JR., ET AL.: The important role of residue F268 in ligand binding by LXRS, Federation of European Biochemical Societies, Published by ELSEVIER SCIENCE B.V., Vol. 484, Pages 159-163 (2000).
- 10. LOVE, JAMES D., ET AL.: The Structural Basis for the Specificity fo Retinoid-X receptor-selective Agonists: New Insights Into the Role of Helix H12, THE JOURNAL OF BIOLOGICAL CHEMISTRY, Vol. 277, No. 13, Pages 11385-11391 (March 29, 2002).

Applicants submit that copies of the above-cited references are enclosed herewith.

U. S. Application Serial No. 10/540,612 Attorney Docket No. 102769-102 Page 3 of 3

If the Examiner has any questions or feels that a discussion with Applicants' representative would expedite prosecution, the Examiner is invited and encouraged to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

MATHIAS FÄRNEGÅRDH, ET AL.

Date: 09 AUG 2006

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FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT BY APPLICANT		ATTY. DOCKET NO. 102769-102 SERIAL NO.		10/540,612		
O A			APPLICANT: MATHIAS FÄRNEGÅRDH, ET AL.			
AUG 1 4 2006 (%)		FILING DATE: JUNE 23, 2005		GROUP:		
1	7	į	J.S. PATENT DOCUMENTS		<u> </u>	
	OCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPR.
2004/	/0018560 A1	01/29/2004	Bledsoe, Randy K., et al.	G01N	33/53	
5,939,	,322	08/17/1999	Rodan, Gideon A., et al.	C12N	15/12	
		FOI	REIGN PATENT DOCUMENTS			
DOCUMENT NO.		DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION Yes No
	OTHER DOCU	MENTS (INCLUI	DING AUTHOR, TITLE, DATE, P	PERTINENT PAG	ES, ETC.)	
200 WI	03). ILLIAMS, SHA	AWN, ET AL	.: X-ray Crystal Structure of BIOLOGICAL CHEMIS	f the Liver X R	Receptor ß Ligar	nd Binding
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200 WI Do (Jul HC Do 334 CR with LT DA XP SH hoor UR Feed	ILLIAMS, SHAMAIN, THE JO ly 18, 2003). DERER, STEF main in Comp. 4, No. 3, Pages RONET, PHIL th AZ 242; Lig. D., Vol. 9, Pages ATABASE UN 1002289057, 1 IINAR, DORG TMONE Nuclear I	AWN, ET ALDURNAL OF CAN, E	Crystal Structure of BIOLOGICAL CHEMIS Crystal Structure of the Huthetic Agonist, THE JOURN exember 12, 2003). Structure of the PPARX of and Agonist Activation in the August, 2001). The Retrieved from EBI, in 461aa overlap with SEQ. L.: NER, a new member of	f the Liver X R TRY, Vol. 27 man Liver X NAL OF MC and -\gamma Ligan the PPAR Fame Database acco Q ID NO 1 A f the gene fame ol. 147, Pages due F268 in 1	Receptor & Ligar, 78, No. 29, Pay Receptor & Ligar DLECULAR B d Binding domaily, ELSEVIEI betract (October 273-276 (1994) and binding diand binding	nd Binding ges 27138-2714 and-binding HOLOGY, Vol. ain in Complex R SCIENCE 055 Uniprot, per 1, 1996). human steroid 4). by LXRß,
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^{*}EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \10706\100\53595.1